

Application No. 10/032,979
Amendment Dated: October 28, 2005
Reply to Office Action of July 19, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1-22. (cancelled)

23. (previously presented) A local videoconferencing device for a videoconferencing system having a local videoconferencing device with a video display and a remote videoconferencing device with a video display interconnected through a network, the local videoconferencing device comprising:

 a videoconferencing bar, wherein the videoconferencing bar comprises,
 a video sensor for capturing images,
 a plurality of microphones for capturing sound, and
 a plurality of speakers for producing sound,
 wherein the video sensors, the microphones and the speakers are
 arranged in fixed positions in the videoconferencing bar;
 a processing unit coupled to the videoconferencing bar; and
 a communication interface coupled to the processing unit and other remote
 videoconferencing devices through the network;
wherein the processing unit is operative to produce at least a first video
 stream from signals received from the video sensor and an audio
 stream and an audio source position signal from signals received from
 the microphones;
wherein the processing unit is operative to receive at least one video
 stream, one audio stream and one audio source position signal from a
 remote videoconferencing device; and
wherein the processing unit is operative to drive the plurality of speakers
 to reproduce sound according to the received audio stream and audio
 source position signal.

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24. (previously presented) The videoconferencing device of claim 23, wherein the video sensor is operative to produce high resolution video stream, wherein the first video stream is of a first resolution, wherein the processing unit is operative to produce a second video stream, and wherein the second video stream is of a second resolution and is representing an area in the first video stream.
25. (previously presented) The videoconferencing device of claim 24, wherein the first resolution of the first video stream is 700x400 pixels, and wherein the second resolution of the second video stream is 300x200 pixels.
26. (previously presented) The videoconferencing device of claim 24, wherein the maximum resolution of the video sensor is 3000x2000 pixels.
27. (previously presented) The videoconferencing device of claim 24, wherein the second video stream represents images of a speaking videoconference participant.
28. (previously presented) The videoconferencing device of claim 27, wherein the second video stream follows the speaking videoconference participant and changes when the speaking videoconference participant changes.
29. (previously presented) The videoconferencing device of claim 23, wherein the processing unit is operative to generate the position signal based upon the magnitude differences of audio signals received from the plurality of microphones.
30. (previously presented) The videoconferencing device of claim 23, wherein the processing unit is operative to synchronize the phases of the signals from the video sensor and a video stream output by a remote videoconference device for display on a remote video display.

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31. (previously presented) The videoconferencing device of claim 23, wherein the processing unit is operative to drive the plurality of speakers to reproduce sound according to the received audio signal and audio source position signal by selectively driving one or more speakers in response to the received position signal from the remote videoconferencing device to play the audio signal corresponding to the image of the at least one video stream.
32. (previously presented) The videoconferencing device of claim 23, wherein the plurality of microphones are arranged in an n-fire configuration in the videoconferencing bar.
33. (previously presented) The videoconferencing device of claim 23, wherein the videoconferencing bar is horizontal and operable to be placed on top of a video display.
34. (previously presented) The videoconferencing device of claim 33, further comprising two side bars having plurality of microphones and speakers, wherein the two side bars are vertical and are operable to be placed on the two sides of the video display.
35. (previously presented) The videoconferencing device of claim 23, wherein the video sensor has a wide viewing angle.
36. (previously presented) The videoconferencing device of claim 35, wherein the wide viewing angle is 65 degrees.
37. (previously presented) The videoconferencing device of claim 35, further comprising a pan motor to increase the viewing angle of the video sensor.

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38. (previously presented) A method for videoconferencing, wherein a plurality of videoconferencing devices are interconnected through a network, wherein each videoconferencing device comprising a videoconferencing bar having a video sensor, a plurality of microphones and speakers, a processing unit, a video display and a network interface, the method comprising:

capturing video images with the video sensor in the videoconferencing bar;

capturing audio signals with the microphones in the videoconferencing bar;

receiving the video images and the audio signals at the processing unit;
generating a first video stream from the video images and an audio stream and an audio position signal from the audio signals;

transmitting the first video stream, audio stream and audio position signal to a remote conferencing device;

displaying the first video stream on a video display at the remote conferencing device; and

driving the speakers at the remote conferencing device to reproduce sound according to the audio stream and the audio position signal.

39. (previously presented) The method in claim 38, wherein the video images are of high resolution, wherein the first video stream is of a first resolution.

40. (previously presented) The method in claim 39, further comprising the processing unit generating a second video stream, wherein the second video stream is of a second resolution and is representing an area in the first video stream.

41. (previously presented) The method in claim 40, wherein the second video stream represents images of a speaking videoconference participant.

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42. (previously presented) The method in claim 38, wherein the audio position signal is generated based upon magnitude differences of audio signals received from the plurality of microphones.
43. (previously presented) The method in claim 38, wherein the processing unit synchronizes phases of the signals.
44. (previously presented) The method in claim 38, further comprising the processing unit driving the plurality of speakers to reproduce sound according to the received audio stream and the audio position signal by selectively driving one or more speakers in response to the received position signal from the remote videoconferencing device to play the audio signal corresponding to the image of the at least one video stream.

45-76. (cancelled)